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Utility Patent Registration In USA

Invention: A SMALL FOUR-STROKE GASOLINE ENGINE WITH OIL MIST LUBRICATION

Registration No: US 7,243,632

Registration Date: 17 July 2007

Registrant: HU, Ji-Rong

Docket No.: 10034

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PATENT NO. : US 7,243,632

APPLICATION NO.: 10/569,027

ISSUE DATE : 17 July 2007

INVENTOR(S) : HU, Ji-Rong

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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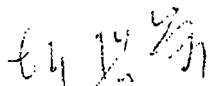
Utility Patent Registration In USA**Invention: A SMALL FOUR-STROKE GASOLINE ENGINE WITH OIL MIST LUBRICATION****Registration No: US 7,243,632****Registration Date: 17 July 2007****Registrant: HU, Ji-Rong****Docket No.: 10034**

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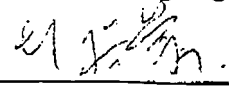
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US007243632B2

(12) **United States Patent**
Hu(10) Patent No.: **US 7,243,632 B2**
(45) Date of Patent: **Jul. 17, 2007**(54) **SMALL FOUR-STROKE GASOLINE ENGINE WITH OIL MIST LUBRICATION**(56) **References Cited****U.S. PATENT DOCUMENTS**

6,394,061 B2 * 5/2002 Ryu et al. 123/196 R

* cited by examiner

Primary Examiner—Noah P. Karnen→ (76) Inventor: **Ji-Rong No Hu**, Office of the Chief Engineer, Xingyue Group, Gushan Industrial Area, Yongkang City, Zhejiang Province (CN) 321307

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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§ 371 (c)(1),

(2), (4) Date: **Feb. 17, 2006**(87) PCT Pub. No.: **WO2005/026504**PCT Pub. Date: **Mar. 24, 2005**(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

Aug. 29, 2003 (CN) 03 2 10165

(51) **Int. Cl.****F01M 1/00** (2006.01)**F01M 1/04** (2006.01)

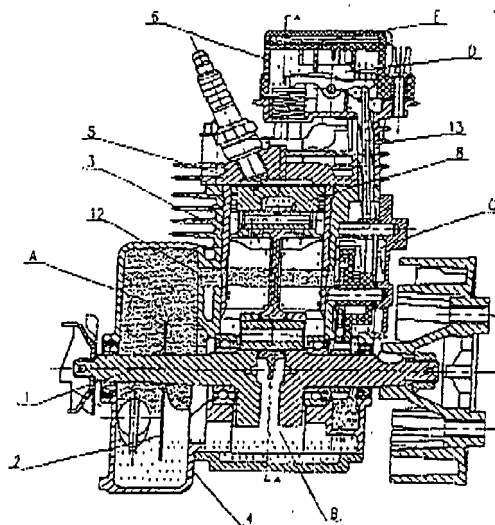
(52) U.S. Cl. 123/196 R; 184/6.5; 184/6.26; 184/11.1; 184/104.3

(58) Field of Classification Search 123/196 R; 184/6.5, 6.8, 6.9, 6.26, 11.1, 104.3

See application file for complete search history.

(57) **ABSTRACT**

The present invention relates to a small four-stroke gasoline engine with oil mist lubrication. The lubrication oil way of the engine includes a crankshaft chamber B, a camshaft chamber C, an upper rocker arm chamber D and a condensation chamber E. The camshaft chamber C communicates with the upper rocker arm chamber D via a tappet cavity 13. The upper rocker arm chamber D communicates with the condensation chamber E. An oil mist chamber A is surrounded by an upper case body 3 and a lower case body 4 at the side of the crankshaft chamber B, the bottom of the oil mist chamber A communicates with the crankshaft chamber B. An oil splash impeller 2 is fixed on a crankshaft, which extends into the oil mist chamber A. An oil way 12 is provided on the upper case body 3 between the oil mist chamber A and the camshaft chamber C. An oil return way 15 is provided on a cylinder head assembly 5. An oil return way 14 is provided on the upper case body 3. An upper interface of the oil return way 15 communicates with the upper rocker arm chamber D, a lower interface of the oil return way 15 communicates with the oil return way 14, and a lower interface of the oil return way 14 communicates with the crankshaft chamber B. The conventional lubricating mode is changed by the structure of the invention, which makes use of the pressure change during the reciprocating movement of a piston assembly 8 to attain the circulation of oil. The structure is simple, reliable in operation and has small consumption in power.

3 Claims, 3 Drawing Sheets

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New Case	Application Data	Patent Data
Status	Transaction History	Continuity Data
Filing	Inventor	Priority
Examiner	Wrapper	Adjustments
Bibliographic	Fees	Publication
Status	Document	Address
Location	Priority	Agency

Bibliographic Data

Application Number:	10/569,027	Customer Number:	-
Filing or 371 (c) Date:	02-17-2006	Status:	Patented Case
Application Type:	Utility	Status Date:	06-27-2007
Examiner Name:	KAMEN, NOAH P	Location:	ELECTRONIC
Group Art Unit:	3747	Location Date:	-
Confirmation Number:	9152	Earliest Publication No:	US 2006-0254556 A1
Attorney Docket Number:	10034	Earliest Publication Date:	11-16-2006
Class / Subclass:	123/196.00R	Patent Number:	7,243,632
First Named Inventor:	Ji-Rong Hu, Yongkang City, (CN)	Issue Date of Patent:	07-17-2007

Title of Invention: SMALL FOUR-STROKE GASOLINE ENGINE WITH OIL MIST LUBRICATION

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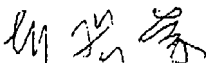
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